

REMARKS

Claims 1-17 continue to be the pending claims in the application. Reconsideration of the application in light of the remarks which follow is respectfully requested.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ahluwalia (U.S. Patent No. 5,965,257) in view of Farrar (U.S. Patent No. 5,338,349) and Langer (U.S. Patent No. 4,600,634). The Examiner contends that Ahluwalia discloses a planar structural article which comprises an ionically charged substrate with a similarly charged coating, a filler material and a binder material. According to the Examiner, the structural material may be coated on one or both sides. The Examiner alleges that the binder comprises an acrylic latex, Hycar 2679, which is a polymer emulsion that contains surfactants. The Examiner further alleges that because a surfactant is present in Ahluwalia's composition, surfactant-generated microcells would also be present. The Examiner also contends that Farrar contains a gelling agent, which the Examiner equates with a gel catalyst of the present claims. The Examiner further contends that Langer teaches a flexible fibrous endothermic sheet as well as a metallic backing, comprising an aluminum foil. The Examiner therefore concludes that the combination of Ahluwalia, Farrar, and Langer renders the claims 1-17 obvious. This rejection is respectfully traversed.

The Claimed Invention

Claim 1 relates to a composite material comprising a first layer which comprises a surfactant component, surfactant-generated microcells, a gel catalyst component and a binder component and a second layer comprising a metallic component adhered to the first layer. Claim 2 covers a composite material comprising a substrate, a first layer adhered to the substrate to provide a coated substrate, and a second layer, adhered to the coated substrate wherein the first

layer comprises a surfactant component, surfactant-generated microcells, a gel catalyst component and a binder component, and wherein the second layer comprises a metallic component. Claims 3-17 are dependent on claim 2 or claims 1 or 2 or claims dependent thereon.

The Prior Art

Ahluwalia discloses a structural article which is made by coating a substrate having an ionic charge with a coating having essentially the same ionic charge. The coating consists essentially of a filler material and a binder material. *See* Ahluwalia, col. 1, line 66 to col. 2, line 3. The coating may occur on one or both sides of the substrate. Ahluwalia, col. 3, lines 43-44. The filler could include charged calcium carbonate or ceramic microspheres. Ahluwalia, col. 2, lines 23-24. The coating is prepared by using a binder material, such as acrylic latex polymer. Hycar 2679, an example of an acrylic latex polymer, is a polymer emulsion which contains soap. Ahluwalia, col. 3, lines 5-8. Ahluwalia also teaches the use of a defoaming agent. Ahluwalia, col. 2, Table I. Planar articles are preferred. Ahluwalia, col. 3, lines 42-43.

Farrar discloses a fire resistant and high temperature insulating composition. A composition is provided which generally comprises a mixture of a carbonate material, an aluminosilicate substance, talc, cellulose, a binder, and a gelling agent. Farrar, col. 3, lines 43-46. Farrar teaches that any known organic gelling agent that swells in the presence of a liquid can be used in the composition. Farrar further teaches that the selected gelling agent should be capable of absorbing water and expanding in size to provide a degree of elasticity to the moist composition. *See* Farrar, col. 5, lines 24-29.

Langer discloses an endothermic, non-insulating, flexible, fibrous material used for fire protection. The endothermic material is made in the form of a mat or sheet. *See* Langer, col. 2, lines 32-33. Langer further discloses an alternative embodiment of its invention which involves adding a backing to the sheet material. Aluminum foil having a thickness of about 0.08mm applied with a pressure sensitive adhesive on one side is considered by Langer to be a

suitable backing material. *See* Langer, col. 4, lines 8-12.

There is No *Prima Facie* Case of Obviousness

The combination of Ahluwalia, Farrar, and Langer does not support a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the combined references must teach or suggest all the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and must not be based on the Applicants disclosure. *In re Vaeck*, 947 F2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991); MPEP § 2142.

In this case, the combined references do not teach or suggest all of the claimed limitations. Every element of the invention must be present in the prior art in order for an examiner to make out a *prima facie* case of obviousness. Applicants' claimed invention includes a surfactant component as well as surfactant-generated microcells. In the Office Action, the Examiner asserts that Ahluwalia discloses a binder material which comprises an acrylic latex, specifically Hycar 2679, which the Examiner notes contains soap, which the Examiner equates with the surfactant in the present claims. The Examiner contends that because a surfactant is present in Ahluwalia's composition, then surfactant-generated microcells would also be present in the material.

Applicants note that Ahluwalia teaches the use of a defoaming agent. *See* Ahluwalia, col. 2, Table I; col. 5, lines 4-9; col. 6, lines 30-31; col. 7, lines 65-66. Applicants assert that the use of such a defoaming agent is added to avoid the production of foam, including surfactant-generated microcells. Accordingly, Ahluwalia lacks the requisite teaching of a coating comprising surfactant-generated microcells and as such teaches away from the present invention.

A prior art reference must be considered in its entirety, including portions that teach away from the claimed invention. *See* MPEP § 2141.02; *see also* *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). It is not appropriate to choose only the desired teaching and not that which teaches away. A reference is said to teach away if a skilled artisan looking to the reference would have taken a different path than the Applicants. *See* *Tec Air, Inc. v. Denso Manufacturing Michigan, Inc.*, 192 F.3d 1353, 1360, 52 U.S.P.Q.2d 1294 (Fed. Cir. 1999). Thus, one skilled in the art looking to Ahluwalia would actually conclude that the formation of surfactant-generated microcells are not desirable.

In the Office Action, the Examiner asserts that Farrar discloses a gelling agent which the Examiner notes is capable of absorbing water and expanding in size to provide a degree of elasticity to the moist composition. The Examiner contends that the gelling agent of Farrar can be equated with the gel catalyst of Applicants' claimed invention. Applicants respectfully disagree.

According to Farrar, the disclosed gelling agent requires the addition of water which is then absorbed by materials in the composition which expand, become moist, and grow in elasticity. *See* Farrar, col. 5, lines 26-29. Indeed, Farrar teaches that any known organic gelling agent that swells in the presence of liquid will suffice. *See* Farrar, col. 5, lines 24-26. Applicants' claimed invention makes use of a gel catalyst to catalyze gel formation. Applicants' gel catalyst may be any component known in the art which catalyzes gel formation. Such catalysts, for example, may promote vulcanization to provide permanent cross-linking and to thermoset the first layer which can enhance the strength of the surfactant-generated microcell structure. *See* Application, page 10. Applicants disclose that the gel catalyst may catalyze gel formation quickly, and therefore may be added after the other components, such as the surfactant and binder, and after the formation of surfactant-generated microcells in order to ensure gel formation does not occur prior to surfactant-generated microcell formation. *See* Application, page 10. Applicants' gel catalyst is not an agent that can simply be moistened to form an

expanded, more elastic composition. Accordingly, Farrar lacks the requisite teaching of the gel catalyst of the present claims.

For the aforementioned reasons, Applicants assert that Ahluwalia does not teach all the limitations of the present claims except for a gel catalyst, a flexible fibrous endothermic sheet, and a metallic backing. Applicants further assert that Farrar and Langer do not remedy the deficiencies of Ahluwalia. Furthermore, Applicants assert that the gelling agent disclosed in Farrar cannot be equated with the gel catalyst of the present claims. Therefore, claims 1-17 are patentable over Ahluwalia in view of Farrar and Langer.

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1-17 under 35 U.S.C. § 103(a).


Conclusion

In view of the foregoing remarks, Applicants submit that the present invention is now in condition for allowance. Accordingly, favorable reconsideration of the application is earnestly solicited. Please send any further correspondence relating to this application to the undersigned attorney at the address below.

Applicants believe no fee is due in connection with this communication. However, should any fee be due in connection with this communication, the Commissioner is authorized to charge any such fee to Deposit Account No. 06-1205.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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